

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-9 (Canceled).

Claim 10 (New): A method of preventing or reducing the formation of gas hydrates in a liquid or a gas comprising adding a solution or dispersion of copolymers composed of

from 40 to 99.5% by weight of at least one ethylenically unsaturated lactam A,

from 0.5 to 60% by weight of at least one C₄ to C₈ alkyl (meth)acrylate (monomer B) having a water solubility of less than 10 parts by weight of monomer in 100 parts by weight of water at 21°C, and

from 0 to 50% by weight of other monomers C

to solvents having a flashpoint greater than 50°C forming a gas hydrate inhibitor and adding the gas hydrate inhibitor to a liquid or gas.

Claim 11 (New): The method according to claim 10, wherein the copolymer is composed of

from 60 to 99% by weight of lactam A,

from 1 to 40% by weight of monomer B, and

from 0 to 39% by weight of monomer C.

Claim 12 (New): The method according to claim 10, wherein the proportion of the monomers C is less than 5% by weight.

Claim 13 (New): The method according to claim 10, wherein the lactam is N-vinylpyrrolidone.

Claim 14 (New): The method according to claim 10, wherein the copolymer is prepared by solution polymerization in solvents having a flashpoint greater than 50°C.

Claim 15 (New): The method according to claim 10, wherein the copolymer has a K value of from 10 to 100, measured in 5% by weight ethanol solution at 21°C.

Claim 16 (New): A process for preventing or reducing the formation of gas hydrates in liquids or gases, comprising adding to these liquids or gases a copolymer or a solution thereof wherein the copolymer or the solution thereof comprises

from 40 to 99.5% by weight of at least one ethylenically unsaturated lactam A,

from 0.5 to 60% by weight of at least one C₄ to C₈ alkyl (meth)acrylate (monomer B) having a water solubility of less than 10 parts by weight of monomer in 100 parts by weight of water at 21°C, and

from 0 to 50% by weight of other monomers C.

Claim 17 (New): The process according to claim 16, wherein the liquids or gases are mineral oil or natural gas.

Claim 18 (New): A solution of copolymers which has a K value of from 10 to 45 in 5% by weight ethanol solution at 21°C comprising,

from 40 to 99.5% by weight of at least one ethylenically unsaturated, cyclic lactam A,
from 0.5 to 60% by weight of monomer B, and
from 0 to 50% by weight of other monomers C
in solvents having a flashpoint greater than 50°C.

Claim 19 (New): The method as claimed in claim 10, wherein the at least one ethylenically unsaturated lactam A is selected from the group consisting of cyclic lactams, noncyclic lactams, vinylactams, N-vinylamides, N-vinyl-N-methylacetamide, N-vinylcaprolactam, N-vinylpyrrolidone and mixtures thereof.

Claim 20 (New): The method as claimed in claim 10, wherein monomer B is selected from the group consisting of n-butyl-acrylate, 2-ethylhexyl acrylate and mixtures thereof.

Claim 21 (New): The method as claimed in claim 10, wherein monomer C is selected from the group consisting of hydroxy(meth)acrylates, (meth)acrylamide, (meth)acrylonitrile, (meth)acrylic acid or salts thereof, acrylamidomethylpropanesulfonic acid or salts thereof and mixtures thereof.

Claim 22 (New): The process as claimed in claim 16 wherein the at least one ethylenically unsaturated lactam A is selected from the group consisting of cyclic lactams, noncyclic lactams, vinylactams, N-vinylamides, N-vinyl-N-methylacetamide, N-vinylcaprolactam, N-vinylpyrrolidone and mixtures thereof.

Claim 23 (New): The process as claimed in claim 16, wherein monomer B is selected from the group consisting of n-butyl-acrylate, 2-ethylhexyl acrylate and mixtures thereof.

Claim 24 (New): The process as claimed in claim 16, wherein monomer C is selected from the group consisting of hydroxy(meth)acrylates, (meth)acrylamide, (meth)acrylonitrile, (meth)acrylic acid or salts thereof, acrylamidomethylpropanesulfonic acid or salts thereof and mixtures thereof.

Claim 25 (New): The solution as claimed in claim 18, wherein the at least one ethylenically unsaturated lactam A is selected from the group consisting of cyclic lactams, noncyclic lactams, vinylactams, N-vinylamides, N-vinyl-N-methylacetamide, N-vinylcaprolactam, N-vinylpyrrolidone and mixtures thereof.

Claim 26 (New): The solution as claimed in claim 18, wherein monomer B is selected from the group consisting of n-butyl-acrylate, 2-ethylhexyl acrylate and mixtures thereof.

Claim 27 (New): The solution as claimed in claim 18, wherein monomer C is selected from the group consisting of hydroxy(meth)acrylates, (meth)acrylamide, (meth)acrylonitrile, (meth)acrylic acid or salts thereof, acrylamidomethylpropanesulfonic acid or salts thereof and mixtures thereof.